

Claims

That which is claimed is:

1. An isolated polypeptide, wherein the amino acid sequence of the polypeptide consists of an amino acid sequence selected from the group consisting of:

- (a) SEQ ID NO:2; and
- (b) an amino acid sequence having at least 99% sequence identity to SEQ ID NO:2.

2. An isolated polypeptide, wherein the amino acid sequence of the polypeptide comprises an amino acid sequence selected from the group consisting of:

- (a) SEQ ID NO:2; and
- (b) an amino acid sequence having at least 99% sequence identity to SEQ ID NO:2.

3. An isolated antibody that selectively binds to the polypeptide of claim 2.

4. An isolated nucleic acid molecule, wherein the nucleotide sequence of the nucleic acid molecule consists of a nucleotide sequence selected from the group consisting of:

- (a) a nucleotide sequence that encodes SEQ ID NO:2;
- (b) a nucleotide sequence that encodes an amino acid sequence having at least 99% sequence identity to SEQ ID NO:2;
- (c) SEQ ID NO:1;
- (d) a nucleotide sequence having at least 99% sequence identity to SEQ ID NO: 1; and
- (e) a nucleotide sequence that is completely complementary to a nucleotide sequence of any one of (a)-(d).

5. An isolated nucleic acid molecule, wherein the nucleotide sequence of the nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of:
 - (a) a nucleotide sequence that encodes SEQ ID NO:2;
 - (b) a nucleotide sequence that encodes an amino acid sequence having at least 99% sequence identity to SEQ ID NO:2;
 - (c) SEQ ID NO:1;
 - (d) a nucleotide sequence having at least 99% sequence identity to SEQ ID NO: 1; and
 - (e) a nucleotide sequence that is completely complementary to a nucleotide sequence of any one of (a)-(d).
6. A nucleic acid array comprising the nucleic acid molecule of claim 5.
7. A transgenic non-human animal comprising the nucleic acid molecule of claim 5.
8. A vector comprising the nucleic acid molecule of claim 5.
9. A host cell containing the vector of claim 8.
10. A process for producing a polypeptide, the process comprising culturing the host cell of claim 9 under conditions sufficient for the production of said polypeptide, and recovering said polypeptide.
11. A method for detecting the presence of the polypeptide of claim 2 in a sample, said method comprising contacting said sample with a detection agent that specifically allows detection of the presence of the polypeptide in the sample and then detecting the presence of the polypeptide.

12. A method for detecting the presence of the nucleic acid molecule of claim 5 in a sample, said method comprising contacting the sample with a probe that hybridizes to said nucleic acid molecule under stringent conditions and determining whether the oligonucleotide binds to said nucleic acid molecule.
13. A method for identifying a modulator of the polypeptide of claim 2, said method comprising contacting said polypeptide or a cell expressing said polypeptide with an agent and determining if said agent has modulated the function, activity, or expression of said polypeptide.
14. The method of claim 13, wherein said agent is administered to a host cell comprising an expression vector that expresses said polypeptide.
15. A method for identifying an agent that binds to the polypeptide of claim 2, said method comprising contacting the polypeptide with an agent and assaying the contacted mixture to determine whether a complex is formed with the agent bound to the polypeptide.
16. A pharmaceutical composition comprising an agent identified by the method of claim 15 and a pharmaceutically acceptable carrier therefor.
17. A method for treating a disease or condition mediated by a Cathepsin S protein, said method comprising administering to a subject a pharmaceutically effective amount of an agent identified by the method of claim 16.
18. The method of claim 17, wherein the subject is a human.
19. The polypeptide of claim 1, further comprising a heterologous amino acid sequence.
20. The antibody of claim 3, wherein the antibody is a monoclonal antibody.